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**United States Securities and Exchange Commission**
**Washington, D.C. 20549**

**NOTICE OF EXEMPT SOLICITATION**
**Pursuant to Rule 14a-103**
**United States Securities and Exchange Commission**
**Washington, D.C. 20549**

**Name of the Registrant: Alphabet Inc.**
**Name of person relying on exemption: Environmental Health Trust**
**Address of person relying on exemption: 8070 Georgia Avenue, Suite 301, Silver Spring, MD 20910**

**Written materials are submitted pursuant to Rule 14a-6(g) (1) promulgated under the Securities Exchange Act of 1934. Submission is not required of this filer under the terms of the Rule but is made voluntarily in the interest of public disclosure and consideration of these important issues.**

**Alphabet Inc. (“Alphabet”)**

**Vote Yes: Item #5**
***Stockholder Proposal Requesting a Report on Electromagnetic Radiation and Wireless Technologies Risks***

**Annual Meeting: June 7, 2024**

**The Environmental Health Trust[1] recommends that Alphabet Inc. investors support shareholder proposal (Item #5) included in the Company’s 2024 proxy statement.**

**SUMMARY**

The shareholder proposal states:

> Resolved, Google shall issue an annual report, at a reasonable expense and excluding proprietary information, on the health effects and financial risks associated with electromagnetic radiation and wireless technologies and compare its safety performance to the other wireless device developers, operators, and manufacturers.

Google sells numerous wireless devices. Radiofrequency (RF) radiation emitted from such wireless products is believed by many market participants and experts to pose significant health, liability and reputational risks. It is in Alphabet shareholders’ best interest for the Company to demonstrate how it is taking meaningful steps to address the safety of the wireless products it markets, and to prove that those products are (i) reasonably used in compliance with both existing and recommended health safety guidelines, and (ii) that insurance is in place now and is reasonably available in the future against such risks.

It is also past time for the Company to “compete on safety,” regarding these products.
The Company's statement in opposition to this proposal downplays the issue. It is not even clear whether the company is insured or under-insured in this matter. Nor is it clear that the Company has made an effort to place in the market products that are increasingly safer than that of the competition. However, the substantial and growing body of peer-reviewed, published scientific literature provides mounting evidence of serious health risks to humans and the environment from long-term exposure to wireless radiation at levels emitted by wireless devices, even with current regulations and disclosures. The Company's current risk factor and Environmental, Social and Governance (ESG) public disclosures neglect fulsomely address these health risks and concomitant financial and reputational liabilities.

[1] The Environmental Health Trust is a 501(c)3 think tank that promotes a healthier environment through research, education, and policy. We work with world-class experts to conduct cutting-edge research that can help inform improved safety standards for sources of pollution, including devices that emit microwave radiation. The filer of the shareholder proposal and investor in Alphabet, Inc,, Lendri S. Purcell, is a board member of the Environmental Health Trust.

The requested disclosure is needed for investors because:

- Research on Impacts on Children: Hundreds of scientists from leading research institutions and medical practitioners have called upon governments, regulatory bodies, and wireless companies to reduce public exposure to wireless radiation, especially for children who are more vulnerable due to their developing physiology and their longer expected period of exposure. Many countries have substantially stricter safety limits for the environmental RF exposures created by wireless networks than those in the U.S.[2]

- Federal Court Order: U.S. RF exposure regulations have not materially changed since they were implemented 28 years ago by the Federal Communications Commission ("FCC"). The FCC on August 13, 2021 was subjected to a federal court *Remand* in the case *Environmental Health Trust et al v. FCC* regarding these very same ancient and materially unchanged human RF exposure rules. The Court also noted the FCC's reliance on the Food and Drug Administration (FDA) and stated the FDA's "conclusory statements do not constitute a reasoned explanation" as "they offer "no articulation of the factual . . . bases for the FDA's conclusion." The FCC has yet to respond to and resolve the *Remand*, including failing to subsequently publish a full and comprehensive scientific review of those same ancient regulations in response to the *Remand*. Likewise, the FDA has yet to materially respond to the ruling.

- Consumer Notice Failures: Company RF exposure warnings currently exist to inform consumers that they must maintain a specific separation distance between their body and their Google phone or wireless device. However, these instructions are not always prominently displayed. Many consumers are likely unaware of the existence of this "warning" due to it taking multiple steps in many cases for a determined consumer to search for and locate the warning. Even upon finding it, the regulatory language is sometimes densely written and hard to understand, and thus ineffective as a notice to most users or prospective users.

- Real World Uses of Company Devices Often Do Not Match Guidelines: The RF exposure compliance recommendations sometimes state that Google's cell phone should be operated no closer than 5mm from the body. A simple online search for Google devices near people results in videos[3] showing consumers using Google wireless phones tucked into exercise clothes and bras and otherwise in direct bodily contact or in close-proximity positions (closer than the RF exposure compliance test position) which could potentially allow RF exposures that exceed regulatory limits.

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[2] Googles phones and wireless products create ambient RF exposures. Many countries have limits for ambient environmental exposures much more stringent than the US. See Rianne Stam,National Institute for Public Health and the Environment, the Netherlands Comparison of international policies on electromagnetic fields (power frequency and radiofrequency fields), 2018https://www.rivm.nl/sites/default/files/2018-11/Comparison%20of%20international%20policies%20on%20electromagnetic%20fields%202018.pdf ; See a country comparison at https://ehtrust.org/u-s-government-regulations-on-cell-tower-radiation/; While the US cell phone local SAR limit is lower than ICNIRPs limit, the FCC has long allowed cell phone compliance tests to use separation distances up to 25 mm, which can result in an actual SAR much higher at closer distances.

[3] Baby Say First Word OK GOOGLE - Bebe Llamando a Google - YouTube https://www.youtube.com/shorts/d3oa6AaEW3o; Baby girl and google home mini Mommy Pinky https://www.youtube.com/watch?v=e48acE0hRUE; Hey Google ABC, Guy with Dreams https://www.facebook.com/reel/3483497335260544; Kids Ask Google home Tech Family Time https://youtu.be/i9ZPJFkP6mg?si=xIyylHfmfiLuWK8L&t=103; Regarding Pixel phones https://9to5google.com/2021/11/15/google-assistant-on-pixel-6-is-randomly-placing-phone-calls-for-some-heres-how-to-stop-it/ ; See also: New York Times on how the Pixel Fold "actually closes completely with no noticeable gap, which creates a more streamlined look and protects the screen more effectively when the device is in a pocket or bag." https://www.nytimes.com/wirecutter/blog/google-pixel-fold-review/; If you have your phone in your pocket https://youtu.be/Vvq8vKXRZLE?si=Fa6GkM66HOEavYyn&t=135; pocket friendly google https://www.youtube.com/watch?v=ZCc9XAGsdG0; https://fi.google.com/about/phones/samsung-galaxy-z-flip5?pli=1 "Pocket sized with big personality" ; https://blog.google/intl/en-ca/products/devices-services/pixel-updates-io-23/
New Pixel devices for your pocket and your home."

- Studies Document Harm: Consumers may suffer injury or disease as a result of exposure to the Company's devices, and the networks servicing those devices, which could result in lawsuits leading to financial risk to Google and Alphabet.[4] Yet Google has not prominently disclosed:
    - ***Is it insured against liabilities from exposure to its RF products. If it is insured, is it under-insured***?
    - ***Has the Company ever conducted "real world usage" testing***, including the proximities of exposure many consumers would face with common usage (2 mm, 1 mm and 0 mm separation of the wireless device from the skin)?
    - ***Has the Company researched and published the impacts of its products on babies and children? Has the Company acknowledged that babies and children have thinner skin, thinner skulls and that their developing brains and organs may be more susceptible to RF radiation from their devices and the networks that support those devices?***
    - ***Has the board or management ever contemplated hardware and software changes to "compete on safety***", ie., developing and marketing RF emitting products safer, with less RF radiation, than those of its competitors?
    - ***Has the board or management researched the RF Exposure guidelines in Switzerland and other countries to determine why those countries have often dramatically different guidelines and regulations?***

Now is the time for Alphabet to improve and to clearly report on its efforts to manage the risks of wireless radiation exposure from Google's wireless devices, mitigate its financial and reputational risks, and educate its customers of the health risks when Google's products are not being used consistent with the consumer warnings.

**We recommend that shareholders vote YES on proposal # 5 which requests Google to issue an annual report on the health effects, safety issues, and financial risks related to Google's wireless products.**

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[4] Research regarding these conclusions includes and is not limited to: Lin, James, *Health Matters: A Paradigm Shift,* IEEE Microwave Magazine, December, 2023, A Paradigm Shift? [Health Matters] (researchgate.net); Miller, A. B., Sears, M. E., Morgan, L. L., Davis, D. L., Hardell, L., Oremus, M., & Soskolne, C. L. (2019). Risks to Health and Well-Being From Radio-Frequency Radiation Emitted by Cell Phones and Other Wireless Devices. *Frontiers in Public Health*, *7*; Electromagnetic Fields of Wireless Communications: Biological and Health Effects
*Edited By Dimitris J. Panagopoulos*, CRC Press (2022), https://doi.org/10.1201/9781003201052

**The shareholder proposal requests the Company to issue an annual report on how it is addressing the health effects and financial risks associated with wireless radiation exposure arising from the use of its wireless devices.**

An enormous body of peer-reviewed, independent scientific research has been published in recent years linking human and animal wireless exposures to a myriad of serious health impacts[5] from cancer[6] to memory,[7] brain development,[8] endocrine system,[9] thyroid,[10] testosterone,[11] reproduction,[12] and DNA/genetic damage.[13,14] Additionally, recently published reviews document evidence of RF radiation's negative impacts to wildlife,[15]especially pollinators[16], as well as plants,[17] and trees,[18] and recommend RF mitigation measures.[19]

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[5] McCredden, J. E., Cook, N., Weller, S., & Leach, V. (2022). Wireless technology is an environmental stressor requiring new understanding and approaches in health care. *Frontiers in Public Health*, *10*

[6] Choi, Y.-J., Moskowitz, J. M., Myung, S.-K., Lee, Y.-R., & Hong, Y.-C. (2020). Cellular Phone Use and Risk of Tumors: Systematic Review and Meta-Analysis. *International Journal of Environmental Research and Public Health*, *17*(21), 8079.; Shih, Y. W., Hung, C. S., Huang, C. C., Chou, K. R., Niu, S. F., Chan, S., & Tsai, H. T. (2020). The Association Between Smartphone Use and Breast Cancer Risk Among Taiwanese Women: A Case-Control Study. *Cancer management and research*, *12*, 10799–10807; West, J. G., Kapoor, N. S., Liao, S. Y., Chen, J. W., Bailey, L., & Nagourney, R. A. (2013). Multifocal Breast Cancer in Young Women with Prolonged Contact between Their Breasts and Their Cellular Phones. *Case reports in medicine*, *2013*, 354682.

[7] Foerster, M., Thielens, A., Joseph, W., Eeftens, M., & R, öösli M. (n.d.). A Prospective Cohort Study of Adolescents' Memory Performance and Individual Brain Dose of Microwave Radiation from Wireless Communication. *Environmental Health Perspectives*, *126*(7), 077007.

[8] Aldad, T. S., Gan, G., Gao, X.-B., & Taylor, H. S. (2012). Fetal Radiofrequency Radiation Exposure From 800-1900 Mhz-Rated Cellular Telephones Affects Neurodevelopment and Behavior in Mice. *Scientific Reports*, *2*(1), 312.

[9] Sangün, Ö., Dündar, B., Çömlekçi, S., & Büyükgebiz, A. (2015). The Effects of Electromagnetic Field on the Endocrine System in Children and Adolescents. *Pediatric Endocrinology Reviews: PER*, *13*(2), 531–545.

[10] Alkayyali, T., Ochuba, O., Srivastava, K., Sandhu, J. K., Joseph, C., Ruo, S. W., Jain, A., Waqar, A., & Poudel, S. (2021). An Exploration of the Effects of Radiofrequency Radiation Emitted by Mobile Phones and Extremely Low Frequency Radiation on Thyroid Hormones and Thyroid Gland Histopathology. *Cureus*, *13*(8).

[11] Maluin, S. M., Osman, K., Jaffar, F. H. F., & Ibrahim, S. F. (2021). Effect of Radiation Emitted by Wireless Devices on Male Reproductive Hormones: A Systematic Review. *Frontiers in Physiology*, *12*.

[12] Gautam R, Pardhiya S, Nirala JP, Sarsaiya P, Rajamani P. Effects of 4G mobile phone radiation exposure on reproductive, hepatic, renal, and hematological parameters of male Wistar rat. Environ Sci Pollut Res Int. 2023 Dec 16; Kim S, Han D, Ryu J, Kim K, Kim YH. Effects of mobile phone usage on sperm quality - No time-dependent relationship on usage: A systematic review and updated meta-analysis. Environ Res. 2021 Nov; Jangid, P., Rai, U., Sharma, R. S., & Singh, R. (2022). The role of non-ionizing electromagnetic radiation on female fertility: A review. *International Journal of Environmental Health Research*, *0*(0), 1–16.

[13] Panagopoulos, D. J., Karabarbounis, A., Yakymenko, I., & Chrousos, G. P. (2021). Human-made electromagnetic fields: Ion forced-oscillation and voltage-gated ion channel dysfunction, oxidative stress and DNA damage (Review). International Journal of Oncology, 59(5), 92.

[14] Smith-Roe, S. L., Wyde, M. E., Stout, M. D., Winters, J. W., Hobbs, C. A., Shepard, K. G., Green, A. S., Kissling, G. E., Shockley, K. R., Tice, R. R., Bucher, J. R., & Witt, K. L. (2020). Evaluation of the genotoxicity of cell phone radiofrequency radiation in male and female rats and mice following subchronic exposure. *Environmental and Molecular Mutagenesis*, *61*(2), 276–290.

[15] Levitt, B. B., Lai, H. C., & Manville, A. M. (2022b). Effects of non-ionizing electromagnetic fields on flora and fauna, Part 2 impacts: How species interact with natural and man-made EMF. *Reviews on Environmental Health*, *37*(3), 327–406; Cucurachi, S., Tamis, W. L. M., Vijver, M. G., Peijnenburg, W. J. G. M., Bolte, J. F. B., & de Snoo, G. R. (2013). A review of the ecological effects of radiofrequency electromagnetic fields (RF-EMF). *Environment International*, *51*, 116–140.

[16] Thill A, Cammaerts MC, Balmori A. Biological effects of electromagnetic fields on insects: a systematic review and meta-analysis. Rev Environ Health. 2023 Nov 23; Thielens, A., Bell, D., Mortimore, D. B., Greco, M. K., Martens, L., & Joseph, W. (2018). Exposure of Insects to Radio-Frequency Electromagnetic Fields from 2 to 120 GHz. Scientific Reports, 8(1), 3924. More at https://www.wildlifeandwireless.org/science

[17] Halgamuge, M. N. (2017). Review: Weak radiofrequency radiation exposure from mobile phone radiation on plants. Electromagnetic Biology and Medicine, 36(2), 213–235.

[18] Waldmann-Selsam, C., Balmori-de la Puente, A., Breunig, H., & Balmori, A. (2016). Radiofrequency radiation injures trees around mobile phone base stations. Science of The Total Environment, 572, 554–569.

[19] Jérémy S. P. Froidevaux, Laura Recuero Virto, Marek Czerwiński, Arno Thielens, and Kirsty J. Park Addressing Wildlife Exposure to Radiofrequency Electromagnetic Fields: Time for Action Environmental Science & Technology Letters, 2024, 11, 1, 3–4 ; Balmori A. (2021) Electromagnetic radiation as an emerging driver factor for the decline of insects. Science of the Total Environment. 767: 144913

Scientific groups[20] and medical organizations,[21] including the American Academy of Pediatrics (AAP), have issued recommendations to reduce children's exposure because RF radiation penetrates deeper in children's brains and bodies,[22] and their rapidly developing brains are more susceptible[23] to adverse health impacts. Lawsuits[24] have alleged health damages from the wireless emissions, and international court cases have settled with compensation.[25]

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[20] International Commission on Biological Effects of EMF https://ehjournal.biomedcentral.com/articles/10.1186/s12940-022-00900-9; Kelley, E., Blank, M., Lai, H., Moskowitz, J., & Havas, M. (2015). International Appeal: Scientists call for protection from non-ionizing electromagnetic field exposure. *European Journal of Oncology*, *Volume 20*, 180–182, EMF Scientists Appeal https://www.emfscientist.org/; 2020 Consensus Statement of UK and International Medical and Scientific Experts and Practitioners on Health Effects of Non-Ionising Radiation https://phiremedical.org/wp-content/uploads/2020/11/2020-Non-Ionising-Radiation-Consensus-Statement.pdf; Oceania Radiofrequency Scientific Advisory Association https://www.frontiersin.org/articles/10.3389/fpubh.2022.986315

[21] Austrian Medical Chamber, Cyprus Committee on Environment and Children's Health https://paidi.com.cy/wp-content/uploads/2019/05/Com-Pos-EN_-F.pdf; Santa Clara California Medical Association https://www.sccma.org/Portals/19/LiveBlog/3697/SCCMA%20Best%20Practices%20for%20Safe%20Technology%20in%20Schools%20Recommendations%20%2021423.pdf?ver=CwFQFTHs4ZuDmjDYrsLXzQ%3d%3d; California Medical Association resolution is reviewed in the article Shallow Minds: How the Internet and Wi–Fi in Schools Can Affect Learning https://www.sccma.org/Portals/19/assets/docs/Shallow%20Minds%20SCCMA%20Article.pdf?ver=4UVRmelW8mFMVHnhaU4Rnw%3d%3d; California Department of Public Health 2017 cell phone advisory https://www.cdph.ca.gov/Programs/CCDPHP/DEODC/EHIB/CDPH%20Document%20Library/Cell-Phone-Guidance.pdf Press release https://www.cdph.ca.gov/Programs/OPA/Pages/NR17-086.aspx

[22] Fernández, C., de Salles, A. A., Sears, M. E., Morris, R. D., & Davis, D. L. (2018). Absorption of wireless radiation in the child versus adult brain and eye from cell phone conversation or virtual reality. Environmental Research, 167, 694–699; Mohammed, B., Jin, J., Abbosh, A. M., Bialkowski, K. S., Manoufali, M., & Crozier, S. (2017). Evaluation of Children's Exposure to Electromagnetic Fields of Mobile Phones Using Age-Specific Head Models With Age-Dependent Dielectric Properties. IEEE Access, 5, 27345–27353.

[23] Davis, D., Birnbaum, L., Ben-Ishai, P., Taylor, H., Sears, M., Butler, T., & Scarato, T. (2023). Wireless technologies, non-ionizing electromagnetic fields and children: Identifying and reducing health risks. *Current Problems in Pediatric and Adolescent Health Care*, *53*(2), 101374; Redmayne, M., & Johansson, O. (2015). Radiofrequency exposure in young and old: Different sensitivities in light of age-relevant natural differences. *Reviews on Environmental Health*, *30*(4), 323–335.

[24] *Murray, et al. v. Motorola et al.*https://portal-dc.tylertech.cloud/app/RegisterOfActions/#/A63BB82B16CD8E57D139B5E53C80B25C8A139A48AB24C42CB538F841709BAED0/anon/portalembed: Lundy, Lundy, Soileau & South, LLP, Press Release: In New Attack on Telecom Secrecy, Family of Pastor Alleges Cell Phone Radiation Link to His Deadly Brain Cancer (April 8, 2021); *April Marie Walker, et al., v. Motorola* Complaint https://ehtrust.org/wp-content/uploads/april_walker_complaint.pdf

[25] In 2017, the Italian court of Ivrea ruled that the long-term use of a company-issued cell phone caused Telecom employee Roberto Romeo's non-cancerous brain tumor and he was ordered to receive compensation; https://www.theguardian.com/technology/2017/apr/21/italian-court-rules-mobile-phone-use-caused-brain-tumour; in 2012, the Italian Supreme Court affirmed a ruling granting a workers compensation claim to the National Institute for Workmen's Compensation https://microwavenews.com/news-center/italian-supreme-court-affirms-tumor-risk.

Very significantly, many wireless telecommunications companies have reportedly been unable to get insurance to comprehensively cover liabilities related to health damages from exposure to radiofrequency emissions.[26]

The world's leading commercial insurers have recognized the risks of wireless radiation exposure for years now, ranking 5G and wireless radiation as "high" risk,[27] comparing the issue to lead and asbestos,[28] and they have excluded liability coverage for such risks. Even the Lloyd's of London marketplace will not insure those risks. For example, a 2019 Report[29] by Swiss Re Institute classifies 5G mobile networks as a potentially "high" "off-the-leash" risk, listing potential health effects from RF as one of the factors in addition to cybersecurity, data privacy and espionage :

> Existing concerns regarding potential negative health effects from electromagnetic fields (EMF) are only likely to increase. An uptick in liability claims could be a potential long-term consequence . . . as the biological effects of EMF in general and 5G in particular are still being debated, potential claims for health impairments may come with a long latency.

General commercial liability insurance policies commonly have "electromagnetic field exclusions" applied as the market standard,[30] and "electromagnetic fields" have been defined as a "pollutant" alongside radioactive waste and hazardous chemicals.[31]

As a result, companies that manufacture and/or sell wireless devices or wireless services may be uninsured or underinsured for potential liability from lawsuits for personal injury or other damages. They also may face the risks of current or future regulation, consumer backlash, and potential disruptions related to not redesigning devices before regulations change or markets shift. Google provides wireless devices. Yet, in our opinion, Alphabet's SEC filings and other public disclosures do a poor job of disclosing such risks to investors and the public. The proposal seeks a remedy to this disclosure gap.

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[26] Roseanne White Geisel, (2007) Insurers exclude risks associated with electromagnetic radiation, Business Insurance.

[27] https://ehtrust.org/key-issues/reports-white-papers-insurance-industry/.

[28] Lloyd's of London Report on Electromagnetic Fields "Electromagnetic fields from mobile phones: recent developments," Lloyd's Emerging Risks Team Report, November 2010; 2016 Austrian Accident Insurance Institute (AUVA) ATHEM Report "Investigation of athermal effects of electromagnetic fields in mobile communications." ; Business Insurance (2011) White paper explores risks that could become 'the next asbestos,' https://www.businessinsurance.com/article/20110517/STORY/110519944/White-paper-explores-risks-that-could-become-the-next-asbestos–
See also Factsheets on Legal Liability of Cell Towers at https://ehtrust.org/wp-content/uploads/Legal-Liability-Cell-Tower-Radiation-Health-Effects-3.pdf.

[29] Swiss Re 5G Report"Off the leash – 5G mobile networks" https://www.swissre.com/institute/research/sonar/sonar2019/SONAR2019-off-the-leash.html PDF https://ehtrust.org/wp-content/uploads/Swiss-Re-SONAR-Publication-2019-excerpt-1.pdf

[30] Complete Markets "Electromagnetic Fields (Utilities) Liability Insurance," https://completemarkets.com/Electromagnetic-Fields-Utilities-Liability-Insurance/Storefronts/; Electromagnetic Field Insurance Policy Exclusions Cell Phone Radiation and EMFs - Environmental Health Trust.

[31] Commercial insurance Employee Benefits Personal Insurance Risk Management Surety "When to Include Contractors Solution Liability" August 29, 2018 https://www.psfinc.com/wp-content/uploads/psfinc/2018/08/PSF_Construction-Pollution-Liability.pdf.

**The fact that Company's wireless devices may comply with the FCC's ancient 28-year-old wireless radiation exposure guidelines is insufficient for protecting against financial and reputational risks, especially because it is unclear that (i) real world usage matches suggested usage, or (ii) the ancient guidelines are sufficient for human and environmental health.**

Alphabet's opposing statement (paragraph 2) contends that its "devices meet regulatory requirements." This response in our opinion is insufficient for a socially responsible corporation. Compliance with the U.S. government's FCC regulations on wireless radiation exposure does not ensure that the health of a Google consumer will not be harmed, especially after years of use. Google's products are used by people for hours a day, with many devices creating 24/7 exposure (such as Wi-Fi routers and cell phones connected to routers and networks). The FCC's RF human exposure limits are designed,[32] however, only to protect users against the heating effects of short-term exposures, not the biological impacts arising from long-term exposure. Nor is it clear that cell phones and supporting networks are being systemically utilized in a manner that complies with the ancient FCC RF exposure limits. Worse, the FCC's RF exposure limits and supporting regulations have been under federal court *Remand* since August 13, 2021.

The current FCC's limits, adopted in 1996, are significantly based on decades-old animal studies that used RF exposure times of *under an hour*.[33] Data on long-term exposure was not prominent in 1996. This is why Norbert Hankin of the Environmental Protection Agency's Radiation Protection Division stated[34] that "federal health and safety agencies have not yet developed policies concerning possible risk from long-term, nonthermal exposures." Aware that the FCC's 1996 limits lacked the underpinning of solid scientific data regarding long-term health effects, the Federal Drug Administration nominated the National Toxicology Program (NTP) of the National Institutes of Health to initiate experiments exposing animals to long-term cell phone radiation because:

> … the existing exposure guidelines are based entirely on protection from acute injury from thermal effects of RF exposure, and may not be protective against any non-thermal effects of chronic exposures.

There are limits to what activities federal agencies have undertaken regarding the issue and a lack of published government scientific reports that address all of the up-to-date science.[35]

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[32] Lai, H., & Levitt, B. B. (2022). The roles of intensity, exposure duration, and modulation on the biological effects of radiofrequency radiation and exposure guidelines. *Electromagnetic Biology and Medicine*, *41*(2), 230–255; Lin, J. C. (2023). Incongruities in recently revised radiofrequency exposure guidelines and standards. *Environmental Research*, *222*, 115369 ; Amy M. Dargo, Justin W. Wilkerson, Thaddeus P. Thomas, Benjamin T. Kalinosky, and Jason A. Payne "Computational modeling investigation of pulsed high peak power microwaves and the potential for traumatic brain injury," *Science Advances* Vol. 7, No. 44 (Oct. 29, 2021).

[33] International Commission on the Biological Effects of Electromagnetic Fields (ICBE-EMF), (2022). Scientific evidence invalidates health assumptions underlying the FCC and ICNIRP exposure limit determinations for radiofrequency radiation: implications for 5G. Environ Health. Oct 18;21(1):92.

[34] https://ehtrust.org/wp-content/uploads/EPA-Hankin-Letter-2002.pdf.

[35] FCC's human exposure limits for RF have not been evaluated via a complete scientific review of all recent bioeffects studies by U.S. agencies with health and safety expertise. The FDA has a literature review (not a systematic review) limited to only cell phones (not Wi-Fi nor full body environmental exposures) and cancer studies (with study publication dates only to 2018), which omits any review of 5G technology and importantly, omits review of studies that focused on non-cancer health impacts such as those related to reproduction and the brain. https://ehtrust.org/wp-content/uploads/Scientists-Letters-to-FDA.pdf; Full FDA Report https://ehtrust.org/wp-content/uploads/FDA-Declaration-EHTRUST.ORG-December-14-2021.pdf;
The EPA's researching into the issue was defunded decades ago and its last research review on biological impacts was dated 1984. On July 8, 2020, EPAs Lee Ann B. Veal wrote Theodora Scarato that "EPA's last review was in the 1984 document Biological Effects of Radiofrequency Radiation. The EPA does not currently have a funded mandate for radiofrequency matters." https://ehtrust.org/wp-content/uploads/EPA-Director-Letter-on-EMFs-to-Theodora-Scarato-July-8-2020.pdf ; The National Cancer Institute has repeatedly stated that "Neither the literature reviews, nor the fact sheets, make safety determinations." https://ehtrust.org/wp-content/uploads/NationalCancerInsituteResponsetoMCPSparentInquiryaboutMontgomeryCountySchoolsStatement.pdf; On July 1, 2015, the Occupational Safety and Health Administration wrote that, "RF emissions are not on OSHA's active regulatory agenda, so we have not conducted a comprehensive literature review or risk assessment on RF hazards." The CDC has no research reports or activities related to EMF bioeffects and EHT's FOIAs show some CDC webpages on RF were drafted with the help of an industry consultant https://ehtrust.org/the-cdc-hired-an-industry-consultant-to-develop-website-information-for-the-public/. Thus, there are not any published systematic reviews on cell phone or wireless radiation health effects that has considered the totality of the up to date research performed by scientific experts in U.S. agencies at all.

The FCCs 1996 human exposure limits are the subject of a major legal case, *Environmental Health Trust (EHT), et al. v. FCC,* 9 F.4th 893 (D.C. Cir. 2021).[36] On August 13, 2021, the U.S. Court of Appeals for the D.C. Circuit ruled that the FCC had acted arbitrarily and capriciously when it terminated an inquiry in 2019 regarding the need to update its 1996 RF exposure guidelines. The court also heavily criticized the FDA. This influential appellate court found that the Commission failed to provide a reasoned explanation for its determination that its guidelines adequately protect against the harmful effects of exposure to radiofrequency radiation unrelated to cancer. It ordered the FCC, on *Remand*, to issue a well-reasoned decision based on an examination of the record evidence specifically regarding the unique vulnerability of children whose brains and developing bodies are more susceptible and the impacts of long-term RF exposure on all persons. Further, the court required the FCC to examine non-cancer evidence such as studies documenting impacts to the neurological, cardiac, reproductive, immune and endocrine systems as well as exacerbation of medical conditions in those already medically vulnerable. In addition, the court ordered the FCC to examine environmental impacts (i.e., negative impacts on the birds, bees, and trees). The court also found that the FCC had failed to address critiques of its cell phone and wireless device test procedures which do not ensure that phones are tested in body contact for pre-market RF compliance. Despite the court mandate, issued in 2021, nearly three years later the FCC has not issued the required justifications.

The *Remand* is outstanding and unresolved. The FCC's failure to act in response to the landmark ruling of the D.C. Circuit Court of Appeals highlights the inadequacies of the FCC's 1996 guidelines and the risks Alphabet faces in relying upon those guidelines for liability "protection" without further adjustment or disclosure.

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**Hundreds of scientists caution that regulations must be strengthened due to mounting scientific research pointing to serious health impacts from everyday cell phone and wireless exposures.**

In its statement opposing this proposal, Alphabet states that scientific research and "consensus" supports current regulatory limits. In fact, hundreds of scientists, doctors, and public health experts[37] are calling for strengthening the current regulations, due to their lack of protection[38]. Literature reviews have found that the majority of studies[39] reviewed identified a broad range of adverse impacts[40] associated with RF exposure.

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[36] https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFDF7/$file/20-1025-1910111.pdf

[37] See footnote 19 and 20.

[38] For example: Electromagnetic Fields of Wireless Communications: Biological and Health Effects
*Edited By Dimitris J. Panagopoulos*, CRC Press (2022), https://doi.org/10.1201/9781003201052

[39] Leach, Victor, Weller, Steven and Redmayne, Mary. "A novel database of bio-effects from non-ionizing radiation" Reviews on Environmental Health, vol. 33, no. 3, 2018, pp. 273-280.https://doi.org/10.1515/reveh-2018-0017; McCredden JE, Weller S and Leach V (2023) The assumption of safety is being used to justify the rollout of 5G technologies. Front. Public Health 11:1058454. doi: 10.3389/fpubh.2023.1058454; Dr. Henry Lai's 1/2024 analysis https://www.saferemr.com/2018/02/effects-of-exposure-to-electromagnetic.html.; Sivani, S, and D. Sudarsanam. (2012): "Impacts of radio-frequency electromagnetic field (RF-EMF) from cell phone towers and wireless devices on biosystem and ecosystem-a review." Biology and Medicine 4, no. 4 202-216.

[40] Repeated exposures are associated with biochemical changes, which can lead to health effects over time. For example, research repeatedly associates RF exposure to oxidative stress, understood to contribute to numerous impacts such as cancer, reproductive and neurological damage. Schuermann, D., & Mevissen, M. (2021). Manmade Electromagnetic Fields and Oxidative Stress—Biological Effects and Consequences for Health. *International Journal of Molecular Sciences*, *22*(7), 3772; Yakymenko, I., Tsybulin, O., Sidorik, E., Henshel, D., Kyrylenko, O., & Kyrylenko, S. (2016). Oxidative mechanisms of biological activity of low-intensity radiofrequency radiation. *Electromagnetic Biology and Medicine*, *35*(2), 186–202; Georgiou, C. D., & Margaritis, L. H. (2021).

As noted above, the DC Circuit, in *EHT, et al. v FCC* ,[41] found the FCC to have inadequately addressed the issue of children's vulnerability. This issue had been highlighted in repeated letters from the American Academy of Pediatrics[42] calling for RF limits to be updated:

> Current FCC standards do not account for the unique vulnerability and use patterns specific to pregnant women and children. It is essential that any new standard for cell phones or other wireless devices be based on protecting the youngest and most vulnerable populations to ensure they are safeguarded throughout their lifetimes.

Numerous published research studies[43] have linked negative health effects to exposures occurring well below the FCC limits and issued science-based recommendations to significantly strengthen RF limits so that they adequately protect against the biological impacts documented in the research. As an example, Lai and Levitt's review of 112 low-intensity studies[44] found that biological effects of RFR could occur at a median specific absorption rate (0.0165 W/kg), far lower than the "fundamentally flawed" and "insupportable" FCC limits. A study by U.S. Army and Air Force Research Laboratories found that high powered pulsed microwave exposures could reach the same threshold pressures of explosive blast brain and football head impact injuries even at levels compliant with current FCC RF limits.[45]

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[41] 9 F.4th 283 (D.C. Cir. 2021); https://www.cadc.uscourts.gov/internet/opinions.nsf/FB976465BF00F8BD85258730004EFDF7/$file/20-1025-1910111.pdf.

[42] American Academy of Pediatrics (AAP) to FCC Commissioner Mignon Clyburn and FDA Commissioner Margaret Hamburg calling for a review of RF guidelines (8/29/2013); AAP Letter to the FCC Chairman calling for the FCC to open up a review of RF guidelines (7/12/2012); AAP Letter to US Representative Dennis Kucinich in Support of the Cell Phone Right to Know Act (12/12/2012), Letters at https://healthytechhome.org/wp-content/uploads/sites/201/American-Academy-of-Pediatrics-Letters-to-FCC-and-Congress-.pdf.

[43] Belpomme, D., Hardell, L., Belyaev, I., Burgio, E., & Carpenter, D. O. (2018). Thermal and non-thermal health effects of low intensity non-ionizing radiation: An international perspective. *Environmental Pollution*, *242*, 643–658; Electromagnetic Biology and Medicine, 41(2), 230–255; Examples include a 2023 study of the Air Force Bioeffects Lab in Texas found epigenetic effects with 114 genes "significantly differentially methylated," in human skin cells after exposure to 900 MHz radiation —a frequency commonly used in wireless communications. The exposure was very low, less than 0.01 W/Kg —a fraction of 4W/kg, the level that current FCC standards assume to be the threshold for harmful RF effects. Cantu, J. C., Butterworth, J. W., Peralta, X. G., Payne, J. A., & Echchgadda, I. (2023). Analysis of global DNA methylation changes in human keratinocytes immediately following exposure to a 900 MHz radiofrequency field. Bioelectromagnetics, 44(3–4), 77–89. A Jacobs University study which found RF exposure at levels far below FCC limits more than doubled the numbers of liver and lung tumors in carcinogen-exposed mice. Lerchl, A., Klose, M., Grote, K., Wilhelm, A. F. X., Spathmann, O., Fiedler, T., Streckert, J., Hansen, V., & Clemens, M. (2015). Tumor promotion by exposure to radiofrequency electromagnetic fields below exposure limits for humans. Biochemical and Biophysical Research Communications, 459(4), 585–590.; Panagopoulos (2024) found mobile phone EMF exposure at a power density ~136 times below ICNIRP and FCC limits, significantly enhanced the genotoxic action of gamma radiation and concluded with recommendations that RF exposure limits should be lowered by over 40,000 times. Panagopoulos DJ. Mobile telephony radiation exerts genotoxic action and significantly enhances the effects of gamma radiation in human cells. Gen Physiol Biophys. 2024 Mar;43(2):103-120. doi: 10.4149/gpb_2023036. Epub 2023 Dec 8. PMID: 38099580.

[44] Lai, H., & Levitt, B. B. (2022). The roles of intensity, exposure duration, and modulation on the biological effects of radiofrequency radiation and exposure guidelines;

[45] A. M. Dagro, J. W. Wilkerson, T. P. Thomas, B. T. Kalinosky, and J. A. Payne, "Computational modeling investigation of pulsed high peak power microwaves and the potential for traumatic brain injury," Sci. Adv., vol. 7, no. 44, pp. 1–10, Oct. 2021, doi: 10.1126/sciadv. abd8405

In 2011, the WHO International Agency for Research on Cancer (WHO/IARC) designated wireless RF radiation as a class 2 B "possible" carcinogen.[46] Many scientists state that additional studies have corroborated the association, and they conclude the current evidence base is robust enough to determine that RF is now at least a probable, if not proven, human carcinogen.[47]

Published analysis of the $30 million NIH's National Toxicology Program animal study concluded that U.S. government FCC limits should be lowered by 200 to 400 times to protect children according to current risk assessment guidelines.[48] In addition to brain cancer, Yale research[49] funded by the American Cancer Society found thyroid cancer to be associated with higher hours of cell phone use in people with genetic susceptibility. Many scientists state that evidence of the link between cancer and RF is robust enough to say that RF is now at least a probable, if not proven human carcinogen.[50]

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[46] May 11, 2011 Press release https://www.iarc.who.int/wp-content/uploads/2018/07/pr208_E.pdf; IARC Working Group on the Evaluation of Carcinogenic Risks to Humans. (2013). Non-ionizing radiation, Part 2: Radiofrequency electromagnetic fields. *IARC Monographs on the Evaluation of Carcinogenic Risks to Humans*, *102*(Pt 2), 1–460.

[47] Hardell, L., & Carlberg, M. (2019). Comments on the US National Toxicology Program technical reports on toxicology and carcinogenesis study in rats exposed to whole-body radiofrequency radiation at 900 MHz and in mice exposed to whole-body radiofrequency radiation at 1,900 MHz. International Journal of Oncology, 54(1), 111–127; Miller, A. B., Morgan, L. L., Udasin, I., & Davis, D. L. (2018). Cancer epidemiology update, following the 2011 IARC evaluation of radiofrequency electromagnetic fields (Monograph 102). Environmental Research, 167, 673–683; Carlberg, M., & Hardell, L. (2017). Evaluation of Mobile Phone and Cordless Phone Use and Glioma Risk Using the Bradford Hill Viewpoints from 1965 on Association or Causation. BioMed Research International, 2017, 9218486; Directorate-General for Parliamentary Research Services (European Parliament), & Belpoggi, F. (2021). Health impact of 5G: Current state of knowledge of 5G related carcinogenic and reproductive/developmental hazards as they emerge from epidemiological studies and in vivo experimental studies. (PDF) Publications Office of the European Union; Peleg M, Berry EM, Deitch M, Nativ O, Richter E.(2022) On radar and radio exposure and cancer in the military setting. Environ Res. 2022 Oct 21:114610; Lin, J. C. (2023). Incongruities in recently revised radiofrequency exposure guidelines and standards. Environmental Research, 222, 115369. Note also publications arguing that ICNIRP and FDA criticisms are unfounded at Melnick, R. L. (2019). Commentary on the utility of the National Toxicology Program study on cell phone radiofrequency radiation data for assessing human health risks despite unfounded criticisms aimed at minimizing the findings of adverse health effects. Environmental Research, 168, 1–6 and Melnick, R. (2020). Regarding ICNIRP'S Evaluation of the National Toxicology Program's Carcinogenicity Studies on Radiofrequency Electromagnetic Fields. Health Physics, 118(6), 678–682.

[48] Uche, U. I., & Naidenko, O. V. (2021). Development of health-based exposure limits for radiofrequency radiation from wireless devices using a benchmark dose approach. *Environmental Health*, *20*(1), 84. https://ntp.niehs.nih.gov/whatwestudy/topics/cellphones; Hardell, L., & Carlberg, M. (2019). Comments on the US National Toxicology Program technical reports on toxicology and carcinogenesis study in rats exposed to whole-body radiofrequency radiation at 900 MHz and in mice exposed to whole-body radiofrequency radiation at 1,900 MHz. *International Journal of Oncology*, *54*(1), 111–127https://doi.org/10.3892/ijo.2018.4606

[49] Luo, J., Li, H., Deziel, N. C., Huang, H., Zhao, N., Ma, S., Ni, X., Udelsman, R., & Zhang, Y. (2020). Genetic susceptibility may modify the association between cell phone use and thyroid cancer: A population-based case-control study in Connecticut. *Environmental Research*, *182*, 109013.

[50] Hardell, L., & Carlberg, M. (2019). Comments on the US National Toxicology Program technical reports on toxicology and carcinogenesis study in rats exposed to whole-body radiofrequency radiation at 900 MHz and in mice exposed to whole-body radiofrequency radiation at 1,900 MHz. *International Journal of Oncology*, *54*(1), 111–127; Miller, A. B., Morgan, L. L., Udasin, I., & Davis, D. L. (2018). Cancer epidemiology update, following the 2011 IARC evaluation of radiofrequency electromagnetic fields (Monograph 102). *Environmental Research*, *167*, 673–683; Carlberg, M., & Hardell, L. (2017). Evaluation of Mobile Phone and Cordless Phone Use and Glioma Risk Using the Bradford Hill Viewpoints from 1965 on Association or Causation. *BioMed Research International*, *2017*, 9218486; Directorate-General for Parliamentary Research Services (European Parliament), & Belpoggi, F. (2021). *Health impact of 5G: Current state of knowledge of 5G related carcinogenic and reproductive/developmental hazards as they emerge from epidemiological studies and in vivo experimental studies*. (PDF) Publications Office of the European Union; Peleg M, Berry EM, Deitch M, Nativ O, Richter E.(2022) On radar and radio exposure and cancer in the military setting. Environ Res. 2022 Oct 21:114610; Lin, J. C. (2023). Incongruities in recently revised radiofrequency exposure guidelines and standards. Environmental Research, 222, 115369.

Chris Portier, PhD, former Director of the U.S. National Center for Environmental Health at the Centers for Disease Control and Prevention in Atlanta and the Director of the Agency for Toxic Substances and Disease Registry, who served on the WHO/IARC panel, submitted a comprehensive review[51] of the scientific research in a major cell phone/brain cancer lawsuit, concluding:

> The evidence on an association between cellular phone use and the risk of glioma in adults is quite strong . . . in my opinion, RF exposure probably causes gliomas and neuromas and, given the human, animal and experimental evidence, I assert that, to a reasonable degree of scientific certainty, the probability that RF exposure causes gliomas and neuromas is high.'

The European Parliament requested a research report, Health Impact of 5G," that concluded that commonly used RFR frequencies (450 to 6000 MHz) are probably carcinogenic for humans and clearly affect male fertility, with possible adverse effects on the development of embryos, fetuses, and newborns.

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**The Company's consumer disclosures and warnings are not proof that consumers mitigate the health risks arising from exposures.**

Several of Google's wireless products, such as speakers and routers, come with Safety & Regulatory Information which warns that ***the user must keep a distance of 20 cm (about 8 in),*** meaning the user should stay at least 20 cm away from the product to avoid overexposure to wireless radiation transmissions from the product. Most users, however, are likely unaware of this important consumer safety information because it is buried among technical material.

For example, the Safety & Regulatory Guide for the Google Home Speaker[52] states:

> To satisfy FCC exposure requirements, a separation distance of at least 20 cm should be maintained between the antenna of this device and persons during device operation. Operations at closer than this distance are not recommended.

The Safety & regulatory information (Pixel & Pixel XL 2016)[53] states:

> Maintain a minimum separation distance of 1.0 cm (0.4 in) between your body and the phone.

The Safety & Regulatory Guide for Pixel 8 & Pixel 8 Pro Smartphone[54] includes the RF measurement (SAR) for a phone "against body with 1.0 cm (0.4 in) separation" inside a long paragraph. A few sentences later, the guide says "Keep the device away from your body to meet the distance requirement."

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[51] https://ehtrust.org/wp-content/uploads/Expert-report-Christopher-J-Portier-Murray-v-Motorola-3-1-2021-1.pdf.

[52] https://support.google.com/product-documentation/answer/7055908?hl=en&ref_topic=10083520&sjid=18041804849223330869-NA#zippy=%2Cgoogle-home.

[53] https://support.google.com/pixelphone/answer/7022290?sjid=16495972913101241406-NA.

[54] https://support.google.com/product-documentation/answer/13662136?hl=en&ref_topic=7083615&sjid=7353392607517584623-NA.

Consumers who do find and read this text may not understand that the reason for the "distance requirement" is that the phone was pre-market tested for RF limit compliance with a distance between the phone and the body phantom. If consumers hold the phone model closer than 1.0 cm from their bodies, they could be exposed to wireless radiation that exceeds the FCC RF exposure limits as the model was apparently not premarket compliance tested closer than 1 cm.

Other Google devices, including the Pixel Fold smartphone[55] and Google Pixel Watch 2[56] include guides that have a section on "Radio Frequency Exposure," stating:

> To reduce the amount of *exposure to radiation, it is recommended to:*
>
> - *When in use,* ***keep the phone away from the belly for pregnant women, and away from the lower abdomen for teenagers.***
> - *Use the built-in speaker, a hands-free kit, or any other similar accessory* ***to keep your mobile device away from your face and body.***
> - *Provide reasonable use of the mobile phone by children and teenagers, for example by* ***avoiding night calls and limiting the frequency and duration of calls.***

These RF exposure warnings are easy to understand and clearly worded. However, not all of the manuals for the Company's wireless devices use similar text. Nor is it clear that the Company conducted pre-market and post-market surveillance to determine consumer compliance with the recommended safe usage of its wireless products.

The RF exposure information the Company provides in its Safety & Regulatory guides should be more prominently displayed to inform consumers and worded more clearly to advise consumers not to carry the cell phone pressed against a body part (e.g., abdomen, breast, leg).

Most consumers reportedly do not carefully read the printed safety booklet, nor do they look deep in the Settings function to find the RF information. Google's webpage "Set up Google Nest or Home speakers or displays for your child"[57] omits the RF instructions.

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**Consumers use the Company's wireless phones and devices in ways that could result in their exposure to RF radiation exceeding the FCC's regulatory limit.**

Many cell phone users keep their cell phones in their shirt or pants pockets or tight-fitting exercise or leisure clothes, and women may carry them in a bra. However regulatory agencies do not require cell phones and wireless devices to be pre-market tested for compliance with RF Specific Absorption Rate (SAR) limits while the wireless device is in contact with the body (such as in a bra, pocket or Spandex pants). Instead, manufacturers bringing a cell phone or wireless device to market in the United States have long been allowed to use a separation distance[58] for its premarket RF radiation SAR test. That separation distance is clearly not aligned with many real-world uses of many of the products that Google sells.

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[55] https://support.google.com/product-documentation/answer/13380503.

[56] https://support.google.com/product-documentation/answer/13844710?sjid=7353392607517584623-NA#Regulatory-US.

[57] https://support.google.com/googlenest/answer/9159927.

[58] The allowed test separation distance has ranged to up to 25 mm over the years. October 23, 2015 General RF Exposure Policies for Equipment Authorization https://apps.fcc.gov/kdb/GetAttachment.html?id=f8IQgJxTTL5y0oRi0cpAuA%3D%3D&desc=447498%20D01%20General%20RF%20Exposure%20Guidance%20v06&tracking_number=20676 states, "this distance is determined by the handset manufacturer according to the typical body-worn accessories users may acquire at the time of equipment certification, but not more than 2.5 cm, to enable users to purchase aftermarket body-worn accessories with the required minimum separation. Currently guidance is in a transition, and the November 29, 2021 447498 D04 Interim General RF Exposure Guidance v01 https://apps.fcc.gov/kdb/GetAttachment.html?id=Z0Stk%2FPOk2hqHgYJNt%2FRlQ%3D%3D&desc=447498%20D04%20Interim%20%20General%20RF%20Exposure%20Guidance%20v01&tracking_number=20676 states, "A test separation distance not exceeding 5 mm shall be applied to determine SAR-based test exemption or SAR values," and "A test distance of up to 10 mm may be applied if prior approval from the FCC is confirmed via a KDB inquiry that smaller distances are not possible for normal operation of host devices in a platform."

Unlike the U.S., France has a systemic post market cell phone and wireless device surveillance program[59] which has so far forced 48 devices to be software updated or withdrawn from the market due to RF limit violations.[60] When they tested phones in body contact positions (0 mm), most exceeded limits.[61] Research analyzing data from French government's post market radiation compliance SAR tests of Motorola, Apple, Samsung, and other manufacturers' cell phone models found that many phone models could exceed FCC's RF radiation exposure limits when SAR tested in 0 mm positions mimicking direct contact with the human body and in some cell phone models, the RF exposure from body contact SAR tests were estimated to exceed FCC RF exposure limits (SAR body limits) up to 11 times.[62]

Besides the French government's body contact testing, the FCC has tested several cell phone models at a 2 mm (0.08 in) distance from the body. The FCC's laboratory testing found that several models exceeded the RF limit of 1.6 W/kg when RF Body SAR tested at 2 mm.[63] However, because the FCC's regulations do not require pre-market compliance tests at 2 mm or 0 mm distance, the cell phone models were not considered to be out of compliance. The FCC's 2mm cell phones test findings exemplify how phones can be compliant when tested in artificial laboratory conditions but exceed limits in real world usage positions.

Online media[64] shows Google consumers using devices in close proximity to the body.

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[59] ANFR-Le DAS, c'est quoi? https://www.anfr.fr/maitriser/equipements-radioelectriques/le-debit-dabsorption-specifique-das/le-das-cest-quoi SAR tests https://data.anfr.fr/.

[60] List of cell phones withdrawn or updated. Phonegate Alert https://phonegatealert.org/en/list-of-mobile-phones-with-non-compliant-sars-removed-or-updated-in-france-2/

[61] https://ehtrust.org/questions-answered-french-cell-phone-data-release-phonegate/.

[62] Gandhi, O. P. (2019). Microwave Emissions From Cell Phones Exceed Safety Limits in Europe and the US When Touching the Body. IEEE Access, 7, 47050–47052.

[63] The FCC SAR test data was released under FOIA at https://ehtrust.org/environmental-health-trust-foia-project/; EHT's Appeal Letter to the FCC; https://ehtrust.org/wp-content/uploads/EHT-Scarato-Appeal-RE_-FOIA-Control-Nos.-2023-000281-and-2023-000325_-FCC-2-mm-Cell-Phone-Radiation-SAR-Tests-December-28-2023-.docx.pdf ; FCC Letter on Cell Phone Radiation Tests Exceeding Limits https://ehtrust.org/wp-content/uploads/FCC-Letter-on-Cell-Phone-Radiation-Tests-Exceeding-Limits-Appeal-by-EHT-ehtrust.org-.pdf, See SAR test findings of the 2 mm tests at https://ehtrust.org/wp-content/uploads/FCC-cell-phone-radiation-tests-foia-.jpg.

[64] Devices closer than the RF exposure stated distance: Baby Say First Word OK GOOGLE - Bebe Llamando a Google - YouTube https://www.youtube.com/shorts/d3oa6AaEW3o; Baby girl and google home mini Mommy Pinky https://www.youtube.com/watch?v=e48acE0hRUE; Hey Google ABC, Guy with Dreams https://www.facebook.com/reel/3483497335260544; Kids Ask Google home Tech Family Time https://youtu.be/i9ZPJFkP6mg?si=xIyylHfmfiLuWK8L&t=103; Pixel 6 screen *constantly* turning on in pocket https://support.google.com/pixelphone/thread/179900717/pixel-6-screen-constantly-turning-on-in-pocket?hl=en; https://lifehacker.com/how-to-stop-your-pixel-from-unlocking-in-your-pocket-1849546190; Google Pixel Fold puts a tablet-sized screen in your pocket for $1799 - Liliputing https://liliputing.com/google-pixel-fold-puts-a-tablet-sized-screen-in-your-pocket-for-1799/ .

Has the Company conducted "real world usage" testing, including and not limited to SAR testing at 2 mm, 1 mm, and 0 mm? While the shareholder proposal provides the Company with full discretion in preparing the proposed report, and does not dictate any particular data points, the results of 0 mm RF SAR tests for the Company's wireless devices would certainly be useful data points to ensure that the wireless devices do not exceed the FCC's and other regulatory bodies' RF limits when used close to the body.

**The Company is exposed to regulatory risk as the rules begin to tighten in some jurisdictions before others.**

Regulatory requirements may change, requiring a more stringent approach. The EU used to allow an up to 25 mm (1 in) separation for cell phone SAR tests. Then the European Commission concluded[65] that allowing the 25 mm distance failed to meet the regulatory requirements for health and safety. In 2016, the European Union laws were strengthened[66] and manufacturers had to ensure the RF SAR test separation distance was no higher than 5 mm (0.2 in). Although the regulations have not been tightened since, French Ministers announced[67] their recommendation that the regulation be further strengthened to ensure SAR phone tests at 0 mm (body contact position) in 2019, and many European organizations are advocating for the update. In contrast, the FCC has long allowed separation distances up to 25mm distance in their cell phone premarket tests and still has not yet fully transitioned to 5mm.[68] Further, several wireless products have instructions to maintain a 20 cm distance and the FCC does not ensure SAR testing at closer distances or body contact, despite people using devices closer than 20 cm.

The fact that FCC's 1996 regulatory requirements do not consider real-world usage positions (0 mm between phone and body) was highlighted years ago by the U.S. Government Accountability Office in its Report on Mobile Phone Health Issues[69] that states:

> Some consumers may use mobile phones against the body, which FCC does not currently test, and could result in RF energy exposure higher than the FCC limit.

Moreover, the U.S. Court of Appeals for the D.C. Circuit recognized the importance of the fact that pre-market RF test separation distance does not reflect real-world use positions. That was one of the central holdings to the Court's mandate in *Environmental Health Trust, et al. v. Federal Communications Commission*, 9 F.4th 893, 908 (D.C. Cir. 2021), that the FCC reconsider and issue well-reasoned conclusions regarding the record evidence of science on the health effects of wireless radiation regarding non-cancer diseases, children's vulnerability, the environment, and its device testing procedures.

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[65] ANFR strengthens the monitoring of exposure to the electromagnetic fields emitted by mobile phones and tablets (SAR), https://www.anfr.fr/en/anfr/news/all-news/detail-of-the-news/exposure-to-electromagnetic-fields-anfr-strengthens-the-monitoring-of-exposure-to-the-electromagnetic-fields-emitted-by-mobile-phones-and-tablets-sar.

[66] Directive https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32014L0053.

[67] https://sante.gouv.fr/archives/archives-presse/archives-communiques-de-presse/article/le-gouvernement-agit-pour-limiter-l-exposition-aux-emissions-de-certains.

[68] October 23, 2015 General RF Exposure Policies for Equipment Authorization https://apps.fcc.gov/kdb/GetAttachment.html?id=f8IQgJxTTL5y0oRi0cpAuA%3D%3D&desc=447498%20D01%20General%20RF%20Exposure%20Guidance%20v06&tracking_number=20676 states, "this distance is determined by the handset manufacturer according to the typical body-worn accessories users may acquire at the time of equipment certification, but not more than 2.5 cm, to enable users to purchase aftermarket body-worn accessories with the required minimum separation. Currently FCC guidance is in a transition, and while new proposed guidance has a 5 mm distance, the 2015 policy with 25 mm seems to still be allowed. https://apps.fcc.gov/oetcf/kdb/forms/FTSSearchResultPage.cfm?switch=P&id=20676

[69] https://www.gao.gov/assets/gao-01-545.pdf.

**Conclusion**

**The Company's inadequate disclosures on wireless health issues could pose financial, reputational, competitive, and regulatory risk. Proactive disclosures and decisions could present beneficial opportunities, including if the Company decided to rigorously "compete on safety" with regard to Human RF exposure.**

The Company has developed extremely rigorous compliance and hazard screenings beyond regulatory requirements for certain toxic chemicals. Investors can encourage the company to take a similar leadership role regarding wireless RF radiation. It is time for the company to unambiguously "compete on safety" regarding the wireless radiation emitted by its products, especially with an open federal court *Remand* concerning the FCC's regulations, and limited information about the Company's ability to obtain adequate insurance against human rf exposure liabilities.

We recommend that you vote **"FOR"** Item 5 on the proxy, the shareholder proposal requesting an annual report on the health effects and financial risks and insurance coverage associated with electromagnetic radiation and wireless technologies and comparing its safety performance to the other wireless device developers, operators and manufacturers.

The Company's existing RF compliance, health and safety procedures regarding its wireless devices lack the transparency and analysis necessary to determine whether and to what extent its products could or do cause negative health impacts to users and others who are exposed to the products' wireless radiation. The issue is becoming increasingly contentious and fraught with risk. An annual report would provide clarity and act as the first step in identifying, addressing, and remediating financial and reputational risk.

**THE FOREGOING INFORMATION MAY BE DISSEMINATED TO SHAREHOLDERS VIA TELEPHONE, U.S. MAIL, E-MAIL, CERTAIN WEBSITES, AND CERTAIN SOCIAL MEDIA VENUES, AND SHOULD NOT BE CONSTRUED AS INVESTMENT ADVICE OR AS A SOLICITATION OF AUTHORITY TO VOTE YOUR PROXY.**

**PROXY CARDS WILL NOT BE ACCEPTED BY THE PROPONENT OR THE ENVIRONMENTAL HEALTH TRUST. TO VOTE YOUR PROXY, PLEASE FOLLOW THE INSTRUCTIONS ON YOUR PROXY CARD.**